



Salmon Aquaculture Dialogue

Salmon is one of the most popular fish species in the United States, Europe and Japan. Since 1980, total annual salmon production has increased almost three-fold – to 2 million metric tons – with the largest production increase coming from farmed, not wild-caught, salmon. Almost two-thirds of the world’s salmon comes from fish farms, mainly in Norway and Chile.

The rapid expansion of the salmon farming industry has not come without impacts – both real and perceived. In 2004, the Salmon Aquaculture Dialogue was formed to develop measurable, performance-based standards that will help minimize the key environmental and social impacts of salmon farming.

The Dialogue includes approximately 500 people, among them salmon producers, academics, feed companies, seafood buyers, and representatives from nongovernmental organizations. More than half of global salmon aquaculture production and one-quarter of its retail sales are represented. Working under the direction of a nine-person steering committee, participants used a transparent, consensus-building process to approve the Dialogue’s goals and objectives, and to identify and agree on the main impacts of salmon farming.

They also developed principles that address the key impacts associated with salmon aquaculture, as well as criteria that aim to provide direction on how to reduce each impact. Under discussion are indicators, which will address how to measure the extent of each impact, and standards, which will be quantitative performance levels that evaluate whether a principle is achieved. Final principles, criteria, indicators and standards are expected by the end of 2010.

Technical working groups (TWGs) are created to help research issues related to salmon aquaculture. To date, TWGs have been formed to produce reports that review the status of existing research related to the impacts associated with salmon farming, identify gaps or areas of disagreement in the research and suggest a process for addressing the gaps. Dialogue participants were actively involved in choosing experts and developing a scope of work for each group.



Salmon Aquaculture Production

- Farmed salmon are most commonly grown in cages or pens in semi-sheltered coastal areas, such as bays or sea lochs
- Large, floating mesh cages are usually used
- Cages are designed to hold salmon but are open to the marine environment
- Juvenile salmon are hatched and raised to become smolts in freshwater before they are transferred to marine open systems to grow

Salmon Aquaculture Dialogue Steering Committee

The Salmon Aquaculture Dialogue is driven by a steering committee that includes representatives from:



SalmonChile





Principles for Salmon Aquaculture

1. Comply with all applicable international and national laws and local regulations
2. Conserve natural habitat, local biodiversity and ecosystem function
3. Protect the health and genetic integrity of wild populations
4. Use resources in an environmentally efficient and responsible manner
5. Manage disease and parasites in an environmentally responsible manner
6. Develop and operate farms in a socially responsible manner
7. Be a good neighbor and conscientious citizen

Voice from the Field

“Nobody has a monopoly on wisdom, so I like to hear what others have to say about things. Through the Dialogue, I’ve heard a lot of ideas and opinions, all of which have helped me broaden my perspective on what the salmon industry needs.”

Trygve Berg Lea, Skretting



Main Impacts of Salmon Aquaculture

Benthic impacts and siting: Chemicals and excess nutrients from food and feces associated with salmon farms can disturb the flora and fauna on the ocean bottom (benthos).

Chemical inputs: Excessive use of chemicals such as antibiotics, antifoulants and pesticides – or the use of banned chemicals – can have unintended consequences for marine organisms and human health.

Disease/parasites: Viruses and parasites can transfer between farmed and wild fish, as well as among farms.

Escapes: Escaped farmed salmon can compete with wild fish and interbreed with local wild stocks of the same population, altering the overall pool of genetic diversity.

Feed: A growing salmon farming business must control and reduce its dependence on fishmeal and fish oil – primary ingredients in salmon feed – so as not to put additional pressure on the world’s fisheries. Fish caught to make fishmeal and oil currently represent one-third of the global fish harvest.

Nutrient loading and carrying capacity: Excess food and fish waste in the water have the potential to increase the levels of nutrients in the water. This can cause the growth of excess algae, which consumes oxygen that is needed by other plant and animal life.

Social issues: Salmon farming often employs a large number of workers on farms and in processing plants, potentially placing labor practices and workers rights under public scrutiny. Additionally, conflicts can arise among users of the shared coastal environment.

To learn more about the Salmon Aquaculture Dialogue and other Dialogues initiated by World Wildlife Fund: worldwildlife.org/aquadialogues



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